

Develop of a Web System to Manage Savings Bank.

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***Abstract.** The project Development of Web System to manage Savings Bank has as purpose implementing a Web System using tools of free software allows to automate the processes that makes in the savings bank of Ambuquí town in order to the work is much more effective to the associates of the Savings bank. With the implementation of the System Web is appreciated a considerable decrease of the time is used in the services lends the savings bank for every single of the associates.*

***Index Terms—**Opportunistic software systems development, Free Software, reusability, It helps for the community.*

1 Introduction

The present thesis project has the purpose of solving a problem in the Ambuquí town the same that will help to it to automate the work that is done every one of the existent savings bank in this town, allowing doing the processes in an automatic way, as a contribution Technical of the North University for the community.

To solve to this problem, jointly with the associates of the savings bank, seems the need to make an application web the same one that will benefit to near thirteen savings bank existent in the town.

The savings bank are created with the only idea of being a help for the community, because people of the poorest places have an access restricted for the obtaining of a credit in the traditional banking, meanwhile they are considered without payment capacity, today to obtain a credit in a financial institution has become something very necessary to start a personal project or in society, It's essential to have opportune and quick access to a credit that can give beginning to the project to start.

In Ambuquí town, the savings bank have established twelve years ago.

For people of Ambuquí town that need to save and obtain credits in a quick and opportune way, this saving modality and credit has become something very necessary daily living.

The savings bank are associations created with a certain number of associates the same ones that obligatorily should attend every week of the year to meet in a certain place to deposit the saving corresponding to the week according to the value that points weekly, It is according to the number of actions that obtain to start every cycle.

The project is denominated Savings Bank System Community (SBSC) it will allow making automatic processes on the savings bank with what the

associates don't make the processes in a manual and obsolete way, to make the project will be used tools of free software.

Hoping the present project is of great contribution for people will be benefitted and also for the readers on the technology used, for this project will apply all knowledge obtained in the classrooms and the most current technological tools to elaborate this kind of projects.

1.1 Definition of the problem

Ambuquí Town from years ago has come making this saving modality, it has come making in a non-automatic way, with what becomes tedious to the moment to make the transactions in the bills of each one of the associates, it has been come managing in a manual way, making controls with obsolete tools, with what exists a high risk of making a mistake because is managed many data in savings bank.

The problem is town hasn't or doesn't possess an operational tool that assigns the processes automatically in the savings bank.

1.2 Solution proposal

We like part of the Technical of the North University, with the purpose of rewarding to the society what learned in the classrooms propose the solution of making a computer system that's used tools of last technology and those are of free software in order to town doesn't cost the royalties of the tools to use in the development and those helped a hundred percent in the obsolete way that one came making processes of the community savings bank in the town, benefitting social and economically to the town with the purpose it can perceive a progress in people go to save.

1.3 General objective

To implement a Web System to the development tools of free software which allows to automate the processes that making in the boxes of savings of

Ambuquí in order to the work will be much more effective for the associates of the savings bank.

1.4 Specific objectives

To make an appropriate order of the processes are being at the savings bank.

To analyze of the necessary requirements in order to the web application works correctly according to the savings bank.

To decrease the times and costs that involves the process of associates' credit application.

To study appropriate tools to use in the development of the project with previous creation of an application of tests for the post-revision of failings with respective manual for the correct use of the application as much the administrator as the other users.

To make a general check of savings bank.

To make an application sufficiently generic to apply in different towns from Imbabura

1.5 Social justification

According to what pursues the Technical of the North University are contributing to the professional community of excellence and that this professionals are of contribution for the community, leave the opportunity to help to the Ambuquí Town, especially people that conform the savings bank that are since people will help to the social and economic growth of the town, they are people that have great incentive for the saving and of great enthusiasm to make any project type to undertake, because the town is rich in productive methods since the residents of this town and their surroundings are mainly small farmers are devoted to the production of several agricultural products as cane, tomato, cucumber or pepper. The population's part is devoted in smaller scale to the trade and the crafts. And over all either require of credits to buy agricultural inputs or principal material.

What this project is of great help for the economic and social growth for town in general.

1.6 Economic justification.

The present project is achievable because it doesn't represent an expense for the associates of the savings bank as much in its elaboration as in its installation, beside, in the time which we are, where the knowledge and the information, it can improve our economic revenues, we are sure it will have too much importance and transcendence for the associates that will be benefit with the project.

Because people conform the saving boxes are of poor resources and they are looking for to grow economically, the system made doesn't have any cost, since it has been developed with tools of free

software, so will be an essential contribution for all the associates that conforms the savings bank.

1.7 Technological justification

In present times the use of technology is indispensable in the daily living and isn't said to make processes that need to make use of technological changes obligatory to be able to automatize, the use of the technology is primordial to make this project because It improves the quality of the service for the users consistently, the quality of the service for users improves in the productivity and the efficiency and better yet, decreases all of the costs.

This project includes the use of the last technological advances being as of this form like students we will investigate and we will apply the knowledge for people's benefits that will be use of the system, and it stops our benefit since with the development of the project be obtain much more experience in the use of the tools than it was investigated to make the project and so it will serve to be good for the professional career.

The system to elaborate of tools of free software so that to the partners of the savings bank it doesn't represent them any value its elaboration being a contribution first mind of the University and the student that it contributes a grain of sand so that you offers to the community what memorized in the classrooms and everybody will be beneficiated.

1.8 Limit

The implementation of the system in Ambuquí town presented some limitations with advancing and growth of the savings bank will leave solving.

The lack of knowledge of the system and of the technology of the users to the beginning will be a little difficult to adapt to this change but with the handling and the use of user's manuals will be much easier to understand it.

The pattern only will have information of the processes that are made in the savings bank of Ambuquí.

The System will be implemented and checked in this town with one of the existent saving boxes.

The infrastructure lack in this place doesn't allow giving bigger reach, since the system will be installed from its beginning.

1.9 Reach

The system of savings bank of community saving will be an application web developed in tools of free software, because will be able to all the users that are registered to consent and that they have privileges to enter, being able to organize and to take an appropriate control of the processes that making in the savings bank.

The system will facilitate the applications of credits, the searches of the associates, it will speed up the opening of saving bills so that the partners make their savings, as of the different processes that's made in the savings bank, negotiating in a quick and direct way among savings-associates' bank only using tools of development of free software.

This system will be developed as project creative innovator for the culmination of studies of the career of System Engineering.

The application has as purpose to systematize the processes that are made in the savings bank allowing being more efficient to the moment to negotiate the processes that are carried out in the savings bank of Ambuquí.

The system of savings bank consists of the following modulates blocks which will settle down operation and main reach:

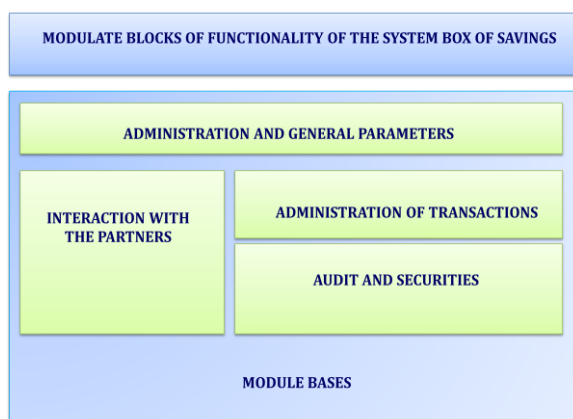


Fig1: Modulate Blocks of the box of savings system community.

Administration and General Parameters

Module designed to administer, modify the charts of parameters of the system.

Interaction with the Users and Partners

Designed module so that the partners enter to the system and they can making sessions of the balance statement and to be able to download in a file PDF.

Audit and Securities

Module to have hints of who I modify made a change in some registration of the system.

Administration of Transactions

Module to make the processes of save, credits, reservation funds.

Module Bases

Module designed to assign lists, to introduce menus to the users that enter to the system.

2 Credits

The area of credits in the saving boxes is one of the main functions it has the savings bank because the

associates are mainly small farmers who are devoted to the production of several agricultural products.

Everybody require of immediate credits to buy agricultural inputs or principal materials, what is needed that the credits are the quickest and opportune thing.

The credits are made to all the partners that integrate the box of savings, without distinction of race, sex, religion, economic and social situation.

The credits are gave to the associates and It is fifty more percent of the mount total of the associates' saving in the cycle, what the associates pays an interest of five percent monthly, giving to a term of three up to six months if the one mounts of the credit it is of six hundred dollars, the payment of the interests is made it every month.

The function of a savings bank is to contribution credits to its associates what allows generating utilities stops at the end of each cycle to be distributed all who form the savings bank.

One of the strengths of the savings bank is the grant of credits to all the partners without is making contrary to the bank entities who consider them to people of poor resources like without payment capacity for this reason people went to make credits to swindlers who lent them the money but with high interests, the vision of the savings bank in an immediate future is to be cooperative of savings in order to people are being made the administrations so that the savings bank are legal totally.

2.1 Credit definition

To know what refers a credit we define what is a credit what we will know and to understand in a better way what refers the credit in the savings bank.

The credit is a financial operation which puts on to our disposition a quantity of money until a specified limit and during a period of certain time.

The quantity and the term approved to each one of the associates of the savings bank depend on the capacity of the associates' payment, for example if an associate has ten actions the one it saves two dollars with fifty every week what is made a projection to the year of hundred thirty dollars what means that to the partner he would be granted a credit of the quantity of his payment capacity

2.2 Guarantees

A guarantee is a juridical business by means which is sought to award from a bigger security to the execution of an obligation or payment of a debt.

In the savings bank of Ambuquí in order to the credits are the quickest and opportune thing for the accrediting associates it will sign a letter of change as guarantees of the borrowed money with the objective of having a back to recover the money of the credit established to the associate in case the associate

doesn't fulfill the cancellation of the gave credit and with his respective interest.

At the moment another politics is opting the conquered credits that it is to get paid I don't eat directive if I don't eat a single person, this person it can be part of the directive one, this is carried out it until the savings bank are legally legal.

3 Theoretical Framework

The system of box of community saving for the parish of Ambuquí is based on the following ones standard and technologies mainly.

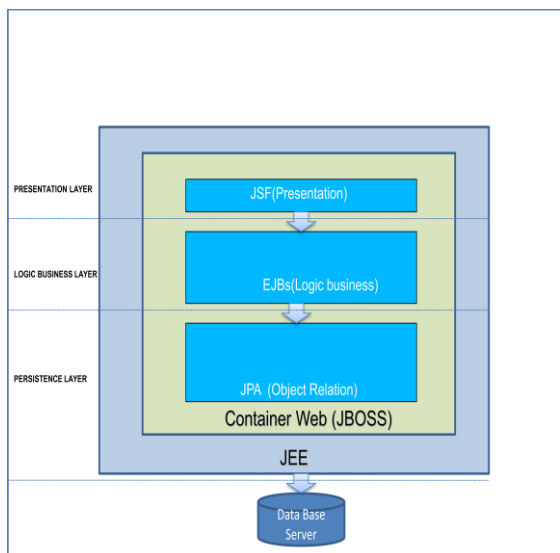


Fig2: Application Architecture

JEE

Java Platform, Enterprise Edition or Java EE is a programming platform to develop and to execute software of applications in programming Language Java with architecture of n distributed layers and it leans on thoroughly in components of software modulates executing on a servant of applications. The platform Java EE is defined by a specification. Similar to other specifications of the Java Community Process

JSF

Framework web MVC (model-view-controller)

Included like standard for the cover web in Java EE 6.

Based on components (on the side of the servant) and in events

Work of the user on the page HTML that unlocks the code execution in the servant to treat them.

Easiness for integration with IDEs (visual editors: components + events + actions)

EJBS

Components negotiated by the container of EJB that implement the logic of the application.

They negotiate the treatment and flow of data in the part of the servant

These offer to their clients (cover of presentation web, applications JSE standalone, other EJBs, services Web) a business interface with the operations that these they can execute to consent and to manage those data.

JPA

(Java Persistence API) like mechanism object-relation-mapping to provide from an access layer to the database.

JBOSS

Principal engine of Applications open source based on Java EE.

The system of savings bank of community saving will be an application Web developed in tools of free software, what people will be able, everybody will can the administrating users of the system who are registered to consent and other users that have privileges to enter, being able to organize and to take an appropriate control of the processes that people are made in the savings bank.

4 Conclusions

With the implementation of the system of savings bank of community saving it was reached the prospective objectives because the system completes the requirements specified in the transactions generated by the partners like they are the saving in its balance statements, the saving in its reservation funds, the obtaining of credits etc.

The system of box of community saving is developed in a generic way, to be able to be implanted since in any savings bank of Imbabura province the processes it could investigate in other towns is similar to those implanted in the system.

The use and investigation of tools of free software makes that we can apply the most current technologies without restriction some for the elaboration of projects people benefit to a conglomerate of them.

It was used and put into practice the knowledge that it is learned in the University to give solution to the problem of not having in current times a system that automates the processes of the savings bank in Ambuquí town.

The investigation of new technologies we allow compare tools because we have used already previously, with the possibility to be in capacity of making comparisons among what of these are more applicable in projects like that we elaborate, concluding that the use of JSF, EJBS, JPA make the elaboration and development is easier in comparison with other development tools.

The implementation of the computer system you could appreciate a considerable decrease of the time

that is used in the services it lends the savings bank in the attention to each one of its associates.

The implementation of the system of box of community saving is viable in order to we all finish beneficiaries, the University completing its objective and preparing professionals highly qualified with capacity of giving solutions to the problems and necessities of the collective, the student puts into practice what investigates and the knowledge acquired in the classrooms to have an exceptional experience for the development in the professional life and the society, it is served as all these elements for benefit of a unlimited part of its members being able to evidence the social and economic growth.

Appendix I

Judgment 1014 Free Software in Ecuador

In the Ecuador the constitutional President of the Republic Rafael Correa signed April 10 the 2008 the Ordinance 1014, which the software free Political become of State to be adopted by all the public entities, this way in the Ecuador the public entities are forced to use free software technologically to be independent.

The free software is not only a technological concept, also it is a social concept, the bet of a government for the free software, it means to bet for its citizenship, for a technological power, for technological independence.

Gratefulness

My family has being the fundamental basis for the finishing of my studies who without sparing any effort they have sacrificed a lot of their life to give me integral education.

Technical of the North University but especially to the Functional Science Engineering Faculty and the Computer Systems Engineering School for allowing me fulfill as a professional.

A member of the Ladies of the saving boxes from Ambuquí town because give me openness and help in the development of this project.

References

- [1] A Meroño Sánchez, J. J. (3 de Octubre de 2009). *Curso Java y Tecnologías JEE*. Obtenido <http://www.bibliocomunidad.com/web/libros/CursoJavayJ2EE.pdf>
- [2] H Plauchu, E. (7 de Septiembre de 2011). *Ciclo de vida del procesamiento de una solicitud en JSF2*. Obtenido de <http://gulsin.org/2011/09/07/ciclo-de-vida-del->

[procesamiento-de-una-solicitud-en-java-server-faces-20/](#)

- [3] Ecuador software libre , Free Software.Obtenido http://www.softwarelibre.ec/site/index.php?option=com_content&view=article&id=112&Itemid=141
- [4] Lizárraga Celaya, C., & Díaz Martínez, S. L. (1 de Octubre de 2007). *USO DE SOFTWARE LIBRE Y DE INTERNET COMO HERRAMIENTAS DE APOYO PARA EL APRENDIZAJE*. Obtenido de <http://espacio.uned.es/fez/eserv.php?pid=bibliuned:20449&dsID=usosoftwarelibre.pdf>